surges and breakers and the expected frequencies. RTI is currently working on one for Pamlico Sound.

It is not necessary to have hurricane force winds to have extremely damaging storm surges capped by high breakers that damage coastal areas. The most devastating coastal storm in the United States never reached hurricane force. This storm, the Ash Wednesday storm of March 6-7, 1962, was born between Florida and Bermuda. It combined with a dying storm system from the Mississippi Valley near Cape Hatteras. Winds of 50 miles per hour developed. These winds blowing over a fetch upwards of 1,200 miles developed a storm surge that battered the coasts of New York, New Jersey, Delaware, Maryland, Virginia, and North Carolina. The battering and erosive action through three successive high tides caused damage of about $190,000,000 and an estimated loss of 34 lives. Swells developed by this storm caused heavy damage to shore installations southward to the coast of Florida. In the Nags Head area this storm produced a tide estimated to be 7 to 9 feet above mean sea level, and this was capped by 12-foot breakers.

2. Coastal Storms

In order to evaluate the risk of damage from coastal storms it is necessary to have information about the major factors contributing to such risk. For risk of damage from coastal storms the following factors should be included:

a) The occurrence of coastal storms.

b) The frequency of damage from wind and waves.

c) The changing pattern of damage.

d) The nature defenses against damage, both natural and man-made.

These factors combine to determine the frequency and degree of damage that can be expected by occupants of the coastal margin.

3. The Occurrence of Coastal Storms

The record of hurricanes is fairly complete since colonization began on the eastern seaboard of North America. Hurricane